AUTHORIZATION TO DISCHARGE UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

In compliance with the provisions of the Federal Clean Water Act as amended: (33 U.S.C.§ 1251 et seq.; the "CWA"),

Town of Epping
Wastewater Treatment Facility

is authorized to discharge from a facility located at

Lagoon Road (off State Highway 125)
Epping, New Hampshire

to receiving waters named

Lamprey River (Hydrologic Basin Code 01060003)

in accordance with effluent limitations, monitoring requirements and other conditions set forth herein.

This permit shall become effective forty-five (45) days from the date of issuance.

This permit and the authorization to discharge expire at midnight, five (5) years from the effective date.

This permit supersedes the permit issued on December 24, 1985.

This permit consists of **15** pages in **PART I** including effluent limitations, monitoring requirements; **Attachment A**, **Freshwater Chronic Toxicity Test Procedure & Protocol**; **Sludge Compliance Guidance**, dated November 4, 1999; and **35** pages in **PART II** including General Conditions and Definitions.

Signed this 16th day of February, 2000

/Signature on File/
Linda M. Murphy, Director
Office of Ecosystem Protection
U.S. Environmental Protection Agency (EPA)
Region I
Boston, Massachusetts

Part 1.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1.a. During the period **June 1st through October 31st** beginning on the effective date of the permit, and lasting through the expiration date, the permittee is authorized to discharge from outfall serial number 001 treated sanitary, commercial and industrial wastewaters. Such discharges shall be limited and monitored by the permittee as specified below. Samples taken in compliance with the monitoring requirements specified below shall be taken at a location that provides a representative analysis of the effluent.

Effluent Characteristic	Discharge Limitations			Monitoring Requirement	
	Average Monthly	Maximum Weekly	Maximum Daily	Measurement Frequency	Sample Type
	(lbs/day)				(specify units)
Flow, MGD			Report[1]	--	Report[1]Continuous Recorder[2]
pH, Standard Units[3]				See **PART I.D.**1.a.1/Day	Grab
Dissolved Oxygen[3,4] mg/l at any time			Not less than 7.0	1/Day	Grab
$CBOD_5$	20	33	41	5 mg/l	8 mg/l 10 mg/l 3/Week[5,6]	24-Hr. Composite
TSS	12	16	25	3 mg/l	4 mg/l 6 mg/l 3/Week[5,6]	24-Hr. Composite
Ammonia Nitrogen as N	5.8	--	8.3	1.4 mg/l	--	2.0 mg/l 3/Week[6]	Grab
Total Phosphorus as P	--	--	1.1	--		

	--	0.28 mg/l	3/Week[6]	24-Hr. Composite							
<u>Escherichia</u> <u>coli</u>, Colonies per 100 ml[3,7]		--	47	--	88	3/Week[6]	Grab				
Total Residual Chlorine[8]	--	--	--	0.048	mg/l	--	0.084 mg/l 1/Day - **When in Use**	Grab			
Total Recoverable Aluminum, mg/l		--	--	0.383		--	3.301 /Week - **When in Use**	Grab			
Total Recoverable and Dissolved Copper, mg/l[9,10]		--	--			--	Report	1/Month	Grab		
Total Recoverable and Dissolved Zinc, mg/l[9,10]		--	--			--	Report	1/Month	Grab		
Whole Effluent Toxicity											
LC50, Percent[11,12,13]		--	--	--			1002/ Period 24-Hr. Composite				
C-NOEC, Percent[12,13,14,15]		--	--	--			$22.72/Period 24-Hr. Composite				
Hardness, mg/l[16]		--	--	--			Report	2/Period	24-Hr. Composite		
Total Recoverable Cadmium, mg/l[16]		--	--	--			Report	2/Period	24-Hr. Composite		
Total Recoverable Chromium, mg/l[16]		--	--	--			Report	2/Period	24-Hr. Composite		
Total Recoverable Nickel, mg/l[16]		--	--	--			Report	2/Period	24-Hr. Composite		
Total Recoverable Lead, mg/l[16]		--	--	--			Report	2/Period	24-Hr. Composite		

See pages 4 through 6 for explanation of superscripts

PART I.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1.b. During the period **November 1st through May 31st** beginning on the effective date of the permit, and lasting through the expiration date, the permittee is authorized to discharge from outfall serial number 001 treated sanitary, commercial and industrial wastewaters. Such discharges shall be limited and monitored by the permittee as specified below. Samples taken in compliance with the monitoring requirements specified below shall be taken at a location that provides a representative analysis of the effluent.

Effluent Characteristic	Discharge Limitations			Monitoring Requirement	
	Average Monthly	Average Weekly	Maximum Daily	Measurement Frequency	Sample Type
Flow, MGD	Report[1]	-	-	Continuous	Recorder[2]
pH, Standard Units[3]	See **PART I.D.**1.a.			1/Day	Grab
Dissolved Oxygen[3,4]	Not less than 7.0 mg/l at any time			1/Day	Grab
$CBOD_5$	33	50	158	8	mg/l
	12 mg/l	38 mg/l	3/Week[5,6]	24-Hr. Composite	
TSS	21	33	138	5 mg/l	8 mg/l
	33 mg/l	3/Week[5,6]	24-Hr. Composite		
Ammonia Nitrogen as N	30	--	45	7.2 mg/l	--
	10.8 mg/l			3/Week[6]	Grab
Total Phosphorus as P	--	--	1.1	--	--
	0.28 mg/l	3/Week[6]	24-Hr. Composite		
Escherichia coli, Colonies per 100 ml[3,7]	--	--	47	--	--
	88	3/Week[6]	Grab		
Total Residual Chlorine[8]	--	--	--	0.048 mg/l	--
	0.084 mg/l			1/Day	-
	When				

						in Use
Total Recoverable Aluminum, mg/l	--	--	0.383	Grab	-	-
					3.301/Week	-
						When in Use
Total Recoverable and Dissolved Copper, mg/l[9,10]	--	--		Grab	-	-
	--	Report	1/Month	Grab		
Total Recoverable and Dissolved Zinc, mg/l[9,10]	--	--		Grab	-	-
	--	Report	1/Month	Grab		
Whole Effluent Toxicity						
LC50, Percent[11,12,13]	--	--	--			
					1002/Period	24-Hr. Composite
C-NOEC, Percent[12,13,14,15]	--	--	--			
					$22.72/Period	24-Hr. Composite
Hardness, mg/l[16]	--	--			-	-
	Report	2/Period	24-Hr. Composite			
Total Recoverable Cadmium, mg/l[16]	--	--				
--	Report	2/Period	24-Hr. Composite			
Total Recoverable Chromium, mg/l[16]	--	--				
--	Report	2/Period	24-Hr. Composite			
Total Recoverable Nickel, mg/l[16]	--	--				
--	Report	2/Period	24-Hr. Composite			
Total Recoverable Lead, mg/l[16]	--	--				
--	Report	2/Period	24-Hr. Composite			

See pages 4 through 6 for explanation of superscripts

FOOTNOTES: (Applicable to PARTs I.A.1.a. & b.)

1. Recorded effluent flows from the Epping Wastewater Treatment Facility (WWTF) must represent actual plant flows (discharge) to the Lamprey River.

2. The effluent flow shall be continuously measured and recorded using a flow meter and totalizer.

3. State certification requirement.

4. Dissolved oxygen measurement(s) shall be taken between 6 A.M. and 8 A.M.

5. The influent concentrations of both Five-Day Carbonaceous Biochemical Oxygen Demand ($CBOD_5$) and Total Suspended Solids (TSS) shall be monitored at a minimum frequency of twice per month (2/Month) using a 24-Hour Composite sample and the results reported as average monthly values.

6. Measurement frequency of 3/Week is defined as samples collected on Monday, Wednesday, and Friday each week.

7. The average monthly value for Escherichia coli shall be determined by calculating the geometric mean and the result reported. Escherichia coli shall be tested using test method 1103.1 found in Test Methods for Escherichia coli and Enterococci in Water by the Membrane Filter Procedure, EPA-600/4-85/076 as amended by test method 9213 D.3. found in Standard Methods for the Examination of Water and Wastewater, 18th or subsequent Edition(s) as approved in 40 Code of Federal Regulations (CFR) Part 136.

8. Any time any form of chlorine is being added to the POTW as part of any treatment process, Total Residual Chlorine (TRC) shall be tested using Amperometric Titration or the DPD Spectrophotometric methods. The EPA approved methods are found in Standard Methods for the Examination of Water and Wastewater, 18th or subsequent Edition(s) as approved in 40 CFR Part 136, Method 4500-Cl E and Method 4500-Cl G or U.S. E.P.A. Manual of Methods of Analysis of Water and Wastes, Method 330.5.

The limit at which compliance/noncompliance determinations will be based is the Minimum Level (ML). For this permit, the ML for TRC has been defined as 0.050 mg/l (50 ug/l) and this value may be reduced by permit modification as more sensitive test methods are approved by the EPA and the New Hampshire Department of Environmental Services, Water Division (NHDES-WD). Any TRC value below 0.050 mg/l (50 ug/l) shall be reported as non-detect on the monthly Discharge Monitoring Report (DMR).

9. Conditions applicable to effluent metals monitoring:

a. For each sample analyzed, the permittee must determine the concentration of each metal in its two phases (Total Recoverable and Dissolved) and report those results on the appropriate DMR.

b. For purposes of reporting, the permittee shall use the ML. The ML is defined as the concentration in a sample equivalent to the concentration of the lowest calibration standard analyzed in

a specific analytical procedure assuming that all the method-specific sample weights, volumes, and processing steps have been followed. The permittee must conduct analyses in accordance with the method specified below and must utilize a standard equivalent to the concentration of the ML specified below:

Parameter	Analytical Method	ML(ìg/l)
Copper	Furnace AA	2.5
Zinc	Furnace AA	2.5

c. The reportable level is the ML as defined above for each metal. For each metal, any value below its ML shall be reported as non-detect on the DMR.

d. Alternate analytical methods shall be approved by EPA at the permittee's written request should the permittee demonstrate to EPA's satisfaction that it already utilizes equally sensitive (same MLs) test methods as those referenced in 9.b. above. Such a request will be considered a minor modification to the permit.

10. During each Whole Effluent Toxicity (WET) test, the permittee has the option of determining the dissolved copper and zinc fractions on the same sample for which Total Recoverable copper and zinc are being determined as part of the quarterly toxicity test in partial fulfillment of this monitoring-only requirement.

11. LC50 is the concentration of wastewater (effluent) causing mortality to 50 percent (%) of the test organisms. The "100 % limit" is defined as a sample which is composed of 100 percent effluent (See A.1 on Page 2 of Part 1 and Attachment A of Part 1). Therefore, a 100 % limit means that a sample of 100 % effluent (no dilution) shall cause no greater than a 50 % mortality rate in that effluent sample. The limit is considered to be a maximum daily limit.

12. The permittee shall conduct chronic (and modified acute) survival and reproduction WET tests on effluent samples using two species, Daphnid (Ceriodaphnia dubia) and Fathead Minnow (Pimephales promelas) following the protocol listed in Attachment A (Freshwater Chronic Toxicity Test Procedure and Protocol dated December 1995). The 2/Period for the **June 1st through October 31st** period is defined as conducting toxicity tests on samples collected between **June 1st and August 31st** and between **September 1st and October 31st**. For the **November 1st through May 31st** period, the 2/Period is defined as conducting toxicity tests on samples collected between **November 1st and January 31st**, and between **March 1st and May 31st**. Toxicity test reports shall be submitted by the 15th day of the month following the end of each 2 or 3 month sampling period.

13. This permit shall be modified, or alternatively, revoked and reissued to incorporate additional toxicity testing requirements, including chemical specific limits, if the results of the WET tests

indicate the discharge causes an exceedance of any State water quality criterion. Results from these toxicity tests are considered "New Information" and the permit may be modified as provided in 40 CFR Section 122.62(a)(2).

14. C-NOEC (Chronic-No Observed Effect Concentration) is defined as the **highest** concentration of toxicant or effluent to which organisms are exposed in a life-cycle or partial life-cycle test which causes no adverse effect on growth, survival, or reproduction at a specific time of observation as determined from hypothesis testing where the test results (growth, survival, and/or reproduction) exhibit a linear dose-response relationship. However, where the test results do not exhibit a linear dose-response relationship, report the **lowest** concentration where there is no observable effect. See **ATTACHMENT A** (**VII. TOXICITY TEST DATA ANALYSIS**) on page A-9 for additional clarification.

15. The C-NOEC limits of "**equal to or greater than 22.7**" is defined as a sample which is composed of **22.7 % (or greater)** effluent, the remainder being dilution water. This is the minimum percentage of effluent at which no chronic effects will be observed. The limit is considered to be a maximum daily limit.

16. For each WET test the permittee shall report on the appropriate DMR, the concentrations of Hardness, and Total Recoverable Cadmium, Chromium, Lead and Nickel found in the 100 percent effluent sample. All these aforementioned chemical parameters shall be determined to at least the Minimum Quantification Level (MLs) shown in Attachment A on page A-8, or as amended. Also, the permittee should note that all chemical parameter results must still be reported in the appropriate toxicity report. The permittee may use results from the WET tests chemical analysis for: Ammonia Nitrogen as Nitrogen and Total Recoverable Aluminum in partial fulfillment of both these limited constituents; and Total Recoverable Copper and Zinc in partial fulfillment of both these monitored constituents if the permittee adheres to Superscript 10.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (Continued)

2. The discharge shall not cause a violation of the water quality standards of the receiving water.

3. The discharge shall be adequately treated to insure that the surface water remains free from pollutants in concentrations or combinations that settle to form harmful deposits, float as foam, debris, scum or other visible pollutants. It shall be adequately treated to insure that the surface waters remain free from pollutants which produce odor, color, taste or turbidity in the

receiving water which is not naturally occurring and would render it unsuitable for its designated uses.

4. The permittee's treatment facility shall maintain a minimum of 85 percent removal of both TSS and $CBOD_5$. The percent removal shall be based on a comparison of average monthly influent versus effluent values.

5. When the effluent discharged for a period of 90 consecutive days exceeds 80 percent of treatment facility's design flow of 0.50 MGD (i.e., 0.40 MGD), the permittee shall submit to the permitting authorities a projection of loadings up to the time when the design capacity of the treatment facility will be reached, and a program for maintaining satisfactory treatment levels consistent with approved water-quality management plans for the Lamprey River, paying particular attention to any management plan(s) developed either as part of this river's National Wild and Scenic Rivers and/or New Hampshire Rivers Management and Protection Program designations. In addition, before the design flow is reached, or whenever treatment necessary to achieve permit limits cannot be assured, the permittee may be required to submit plans for facility improvements.

6. A User may not introduce into any Publicly Owned Treatment Works (POTWs) any pollutant(s) which cause Pass Through or Interference. The terms User, Pass Through and Interference are defined in 40 CFR Section 403.3

7. All POTWs must provide adequate notice to both EPA and NHDES-WD of the following:

a. Any new introduction of pollutants into the POTW from an indirect discharger in a primary industry category (see 40 CFR §122 Appendix A as amended) discharging process water; and

b. Any substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of issuance of the permit.

c. For purposes of this paragraph, adequate notice shall include information on:

(1) the quantity and quality of effluent introduced into the facility; and

(2) any anticipated impact of the change on the quantity or quality of effluent to be discharged from the facility.

8. The permittee shall submit to EPA and NHDES-WD the name of any

Industrial User (IU) subject to Categorical Pretreatment Standards pursuant to 40 CFR §403.6 and 40 CFR Chapter I, Subchapter N (Parts 405-415, 417-436, 439-440, 443, 446-447, 454-455, 457-461, 463-469, and 471 as amended) **who commences discharge to the POTW after the effective date of this permit**. This reporting requirement also applies to any other IU that discharges an average of 25,000 gallons per day or more of process wastewater into the POTW (excluding sanitary, noncontact cooling and boiler blowdown wastewater) or contributes a process wastewater which makes up five (5) percent or more of the average dry-weather hydraulic or organic capacity of the POTW; or is designated as such by the Control Authority as defined in 40 CFR §403.12(a) on the basis that the industrial user has a reasonable potential for adversely affecting the POTW's operation or for violating any pretreatment standard or requirement (in accordance with 40 CFR §403.8(f)(6)).

9. In the event that the permittee receives reports (baseline monitoring reports, 90-day compliance reports, periodic reports on continued compliance, etc.) from Users subject to Categorical Pretreatment Standards under 40 CFR §403.6 and 40 CFR Chapter I, Subchapter N (Parts 405-415, 417-436, 439-440, 443, 446-447, 454-455, 457-461, 463-469, and 471 as amended), the permittee shall forward all copies of these reports within ninety (90) days of their receipt to EPA and NHDES-WD.

10. The permittee shall not discharge into the receiving water any pollutant or combination of pollutants in toxic amounts.

B. SLUDGE CONDITIONS

1. The permittee shall comply with all existing federal & state laws and regulations that apply to sewage sludge use and disposal practices and with the CWA Section 405(d) technical standards.

2. The permittee shall comply with the more stringent of either the state or federal requirements.

3. The technical standards (Part 503 regulations) apply to facilities which perform one or more of the following use or disposal practices.

   a. Land application - the use of sewage sludge to condition or fertilize the soil.

   b. Surface disposal - the placement of sewage sludge in a sludge only landfill.

   c. Placement of sludge in a municipal solid waste landfill.

d. Sewage sludge incineration in a sludge only incinerator.

4. These conditions do not apply to facilities which transport sewage sludge to another facility for use or disposal. Also, these conditions do not apply to facilities which do not dispose of sewage sludge during the life of the permit but rather treat the sludge (lagoons-reed beds), or are otherwise excluded under 40 CFR Part 503.6.

5. The permittee shall use and comply with the attached Sludge Compliance Guidance document to determine appropriate conditions. Appropriate conditions contain the following elements:

a. General requirements
b. Pollutant limitations
c. Operational Standards (pathogen reduction requirements and vector attraction reduction requirements)
d. Management practices
e. Record keeping
f. Monitoring
g. Reporting

Depending upon the quality of material produced by a facility all conditions may not apply to the facility.

6. The permittee shall monitor the pollutant concentrations, pathogen reduction and vector attraction reduction at the following frequency. This frequency is based upon the volume of sewage sludge generated at the facility in dry metric tons per year.

less than 290	1/Year
290 to less than 1,500	1/Quarter
1,500 to less than 15,000	6/Year
15,000 plus	1/Month

7. The permittee shall sample the sewage sludge using the procedures detailed in 40 CFR Part 503.8.

8. The permittee shall submit an annual report containing the information specified in the Sludge Compliance Guidance document. Reports are due annually by February 19th. Reports shall be submitted to the addresses (both EPA and NHDES-WD) contained in the reporting section of the permit.

C. MONITORING AND REPORTING

Monitoring results obtained during the previous month shall be summarized for each month and reported on a separate Discharge Monitoring Report Form(s) (DMRs) postmarked no later than the 15th day of the month following the effective date of the permit.

Signed and Dated original DMRs, and all other reports required herein, shall be submitted to EPA at the following address:

U.S. Environmental Protection Agency
Water Technical Unit (SEW)
P.O. Box 8127
Boston, Massachusetts 02114-8127

Duplicate signed copies of all reports required herein shall be submitted to the State at:

New Hampshire Department of Environmental Services
Water Division
Wastewater Engineering Bureau
6 Hazen Drive, P.O. Box 95
Concord, New Hampshire 03302-0095

D. STATE PERMIT CONDITIONS

1. The permittee shall comply with the following conditions which are included as State Certification requirements.

   a. The pH range of 6.5-8.0 Standard Units (S.U.) must be achieved in the final effluent unless the permittee can demonstrate to NHDES-WD: (1) that the range should be widened due to naturally occurring conditions in the receiving water or (2) that the naturally occurring receiving water pH is not significantly altered by the permittee's discharge. The scope of any demonstration project must receive prior approval from NHDES-WD. In no case, shall the above procedure result in pH limits outside of the range of 6.0 to 9.0 S.U., which is the federal effluent limitation guideline regulation for pH for secondary treatment and is found in 40 CFR §133.102(c).

b. Pursuant to State Law NH RSA 485-A:13 and the New Hampshire Code of Administrative Rules, Env-Ws 405.04(b), submission shall be made to the NHDES-WD, of a Discharge Permit Request form by a municipality proposing to accept into its POTW (including sewers and interceptors):

   (1) any increase in industrial wastewater flow, pollutant characteristics or pollutant concentration; or

   (2) any increase in sanitary wastewater flow of 5,000 gallons per day, or more.

c. The permittee shall not at any time, either alone or in conjunction with any person or persons, cause directly or indirectly the discharge of waste into the said receiving water unless it has been treated in such a manner as will not lower the legislated water quality classification or interfere with the uses assigned to said water by the New Hampshire Legislature (RSA 485-A:12).

d. Any modifications of the Permittees Sewer-Use Ordinance, including local limitations on pollutant concentrations, shall be submitted to the NHDES-WD for approval prior to adoption by the permittee.

e. Within 90 days of the effective date of this permit, the permittee shall submit to NHDES-WD a copy of its current sewer-use ordinance and a copy of any other document granting legal authority to issue permits to industries discharging industrial waste to the municipal wastewater treatment plant.

f. Within 120 days of the effective date of this permit, the permittee shall submit to NHDES-WD a current list of all industries discharging industrial waste to the municipal wastewater treatment plant. At a minimum, the list shall indicate the name and address of each industry, along with the following information: telephone number, contact person, facility description, production quantity, products manufactured, industrial processes used, chemicals used in processes, existing level of pretreatment, and list of existing discharge permits.

g. Within 270 days of the effective date of this permit, the permittee shall submit to NHDES-WD a copy of discharge permit(s) issued to each industry discharging industrial waste to the municipal wastewater treatment plant. At a minimum, each permit shall contain the following: effective dates; flow and applicable pollutant limits; self-monitoring, reporting, compliance monitoring and inspection provisions; and enforcement criteria. If industrial permitting authority does not exist as of the effective date of this permit, the permittee is requested to submit to the NHDES-WD a proposed plan and implementation schedule for adopting such authority and implementing an industrial permitting system.

2. This NPDES Discharge Permit is issued by the EPA under Federal and State law. Upon final issuance by the EPA, the NHDES-WD may adopt this permit, including all terms and conditions, as a State permit pursuant to RSA 485-A:13.

Each Agency shall have the independent right to enforce the terms and conditions of this Permit. Any modification, suspension or revocation of this Permit shall be effective only with respect to the Agency taking such action, and shall not affect the validity or status of the Permit as issued by the other Agency, unless and until each Agency has concurred in writing with such modification, suspension or revocation.

E. SPECIAL CONDITION

Both following special conditions are not applicable until after the upgraded treatment works is completed and deemed fully operational by the EPA and/or the NHDES-WD.

Whole Effluent Toxicity Test Frequency Adjustment

The permittee may submit a written request to the EPA requesting a reduction in the frequency (to not less than once per year) of required toxicity testing, after completion of a minimum of the most recent four (4) successive toxicity tests of effluent, all of which must be valid tests and must demonstrate compliance with the permit limits for whole effluent toxicity. Until written notice is received by certified mail from the EPA indicating that the Whole Effluent Testing requirement has been changed, the permittee is required to continue testing at the frequency specified in the respective permit.

pH Limit Adjustment

The permittee may submit a written request to the EPA requesting a change in the permitted pH limit range to be not less restrictive than 6.0 to 9.0 Standard Units found in the applicable National Effluent Limitation Guideline (Secondary Treatment Regulations in 40 CFR Part 133) for this facility. The permittees written request must include the State's approval letter containing an original signature (no copies). The State's letter shall state that the permittee has demonstrated to the State's satisfaction that as long as discharges to the receiving water from a specific outfall are within a specific numeric pH range the naturally occurring receiving water pH will be unaltered. That letter must specify for each outfall the associated numeric pH limit range. Until written notice is received by certified mail from the EPA indicating the pH limit range has been changed, the permittee is required to meet the permitted pH limit range in the respective permit.